REMARKS

Claims 1-35, all the claims pending in the application, stand rejected. Claims 1, 7, 8, 10, 13-22 and 25-32 are amended.

Claim Rejections - 35 U.S.C. § 103

Claims 1-35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sone (5,919,047) in view of Tsai et al (6,352,432). This rejection is traversed for at least the following reasons.

As a preliminary matter, Applicant notes that the Examiner has withdrawn the finality of the previous Office Action and has prepared a new non-final Office Action. In particular, the Examiner has identified additional disclosure in the previously considered patent to Sone (5,919,047) and has newly cited the patent to Tsai et al (6,352,432) in support of his rejection. On the basis of the amendments and arguments presented subsequently, this rejection should be overcome.

Sone

Sone concerns a <u>karaoke machine</u> that can play a medley of songs that are assembled in a "medley performance mode," as disclosed at col. 7, line 31 to col. 12, line 4. The key to Sone's medley technique is the definition in the selected songs of "sabi" or a "main section" of the songs for replay. The medley performance mode follows the process according to the flow chart of Fig. 4, and includes the execution of a preparation processing operation according to Fig. 5, and thereafter a performance processing operation according to Fig. 6. In the preparation processing operation contemplated by Sone, as disclosed at col. 8, lines 17-35, the music pieces to be played are specified and each track of the musical data for the piece is read at high speed (100 times normal performance speed) and the parameter buffers are updated on the basis of the read data, for subsequent use in the performance mode. Once the buffers have been filled with parameters for the selected songs, in the performance mode, the karaoke machine automatically selects an optimal linking mode for each of the connections during the medley performance, as disclosed at col. 8, line 66 to col. 9, line 6. The link processing may follow any of three

techniques, including use of a joining mode, a cross-fading mode and a bridging mode, as illustrated in Figs. 7A, 7B and 7C, respectively.

In formulating the new rejection, the Examiner has now focused on the teachings in Sone with regard to Fig. 7C and the related disclosure at col. 10, line 7 - col. 11, line 20. Applicant respectfully submits that this disclosure is distinguishable from the invention, as now claimed, for the following reasons.

The relevant teachings in Fig. 7C concerns the preparation of a medley of songs where a smooth transition is made between a first music piece and a second music piece using a "bridge section." By comparison, Fig. 7A of Sone shows a <u>direct joint</u> between a first and second music piece, which is accomplished in a "joining mode" while Fig. 7B shows an <u>indirect joint</u> where the first music piece tails off and a second music piece begins during the tail off portion of the first piece. Neither of the embodiments of Figs. 7A or 7B is pertinent to the presently claimed invention and, moreover, a careful consideration of the illustration of the <u>indirect joint using a bridge section</u> in Fig. 7C of Sone and its related disclosure clearly demonstrates a difference between the claimed invention and the teachings of Sone.

The Bridge Section of Sone is Not Determined Prior to Selection

As disclosed at col. 10, lines 20-42, the bridge section used in Fig. 7C is automatically generated by an editor device in a CPU. The editor device considers volume, tempo, rhythms, and the like of preceding and succeeding pieces in generating the link. This generation is performed after selection of the sequence of original pieces to be played. There is no teaching of the bridge being generated before selection and stored for later selection and use.

The present invention performs the generation of connection pieces and stores them before any selection of an original piece for playback is made. Indeed, these are pre-recorded and stored with the original pieces, as illustrated in Fig. 4 of the present application, and are selected for play in accordance with their compatibility with the original pieces that have been selected for play.

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This feature is now reflected in amended claims 7, 21 and 27-29. It is not found in Sone nor would it be obvious to use this technique, as Sone clearly focuses on real-time production of the bridging pieces after selection of the original pieces for play.

Sone Is Limited To SABI And Has No Preamble or Post-Amble

In the karaoke machine disclosed in Sone, there is a clear and exclusive reliance on "sabi," which represents only a portion (the most significant or popular section) of an original piece. Sone does not use the entire original piece in its medley mode operation. Accordingly, Sone's device makes smooth connection between a "sabi" of preceding music and a "sabi" of succeeding music. According to the transition mode as shown in Fig. 7C, first sabi and second sabi are connected smoothly by inserting the bridge section.

Sone discloses at col. 6, lines 20-25 that a control information track or index track is written with a sabi start marker and a sabi end marker, and these markers are used for the transition in synchronization with a start and an end of a sabi, as shown Fig. 7C. Notably, the sabi does not include a preamble or post-amble. To the extent that an original piece may have music before and after a sabi, that music is never played or outputted during the medley operation.

This distinction is clearly illustrated by a comparison of the timings in the present invention as illustrated in Fig. 5 and the timing as illustrated in Fig. 7C of Sone. Sone has no teaching or illustration with respect to preamble timing and post-amble timing. Thus, unlike the present invention, there is no structure disclosed in Sone for detecting the timing in such sections and implementing an appropriate transition with a connecting section.

In sum, the essential feature and focus of Sone is on a system that does not use preamble or post-amble music. By contrast, all of the claims refer to the use of a preamble or a post amble in the original music in connection with the generation of a sequence of original pieces using a connection piece. Without a consideration of either or both of a preamble and post-amble, the claimed invention cannot be anticipated or rendered obvious.

Sone Has No Connection Music Output Concurrent With A Preamble or Post-Amble

In accomplishing its transition from one sabi to another, Sone requires preparation processing, as disclosed with regard to Fig. 5. Thus, Sone must perform pre-reading of the section preceding the sabi section at col. 8, line 3-35. However, in the actual play of the sabi, according to Fig. 6, there is no output of music from the original piece, either before or after the sabi. Thus, the transition from one sabi to the bridging piece and from the bridging piece to the next sabi is abrupt. In other words, there is no overlap of the connection piece with either of a preamble or a post-amble, as is clearly demonstrated from several elements of the Sone teachings.

First, in the transition mode as shown in Fig. 7C of Sone, the sabi start marker is detected by the preparation processing shown in Fig. 5 beforehand, and only the sabi section is played back in the performance processing shown in Fig. 6. There is no playback of any other part of the original piece.

Second, in the illustration of Fig. 7C, the bridge section appears to be joined to the first music piece section by a direct joint. Similarly, the second music piece section is joined to the bridge section by a direct joint. With reference to Figs. 7A that illustrates a direct joint, it is clear that the bridge section requires an abrupt and immediate change with respect to the first and second pieces. If a smoother transition were required, that is one involving a preamble or post-amble that overlap the bridge portion, a different schematic illustration would have been provided, as in Fig. 7B.

Third, since the bridge is automatically generated, according to the teachings in Sone at col. 10, line 20, by adjustment of volume, tempo, rhythm and cord, it appears that Sone is willing to tolerate an abrupt change. Sone provides rules for the formation of the bridge section beginning at col. 10, line 43. Notably, as explained at col. 10, line 61, a change will take place "immediately after the end" of a preceding music piece.

By contrast, the present invention clearly depends on the overlap of an output of the connection piece with at least one of the preamble and post-amble. As shown Fig. 4 of the

present application, timings TS, TF and TP are stored in association with the original music data. At least, original music reproduction start timing TP and timing control using TP, as illustrated in Fig. 5 & Fig. 7, are characteristic of the present application. When timing TP arrives, the CPU 14 instructs the CD-ROM reader 24 to read out the original music data, and the CD-ROM reader 24 gets started with data-read of the preamble. This preamble reading is same speed as main part reading from timing TS. In fact, during the original music reproduction of the present application, original music data is read out from start to finish at normal reproduction speed, even if an output volume of preamble or post-amble is set to zero. As is clear from Fig. 5, there is a concurrent output of the post-amble of a first original piece and the connection piece. Similarly, there may also or alternatively be a concurrent output of the preamble of the second original piece and the connection piece. Sone does not teach such overlap or such timing TP and timing control using TP. These features are reflected in amended claims 1, 7,, 11, 13-22, 25 and 29-32, and would not be obvious from the teachings of Sone.

The Examiner has argued that the first music piece session inherently has a post amble and that the second music piece section inherently has a preamble. However, this is contrary to the clear teachings in the patent at col. 10, where it is only the bridge section which is automatically generated to satisfy certain conditions, including a smooth shift in volume, tempo, timing, rhythm, keys and cords. Clearly, Sone does not consider the timing and content (e.g., post-amble and preamble) in controlling the formation of a medley of music pieces.

Tsai et al

Applicants note that the Tsai et al reference is cited solely for its teaching of a karaoke apparatus that permits a game-type environment where performers may compete against each other in singing songs. This arrangement is characterized as a game because, as disclosed at col. 6, line 20, the input to first and second microphones (7a, 7b) by participants is compared in frequency and volume to a reference 34 of a guide melody and points are calculated periodically. At the end of the karaoke music piece, the accumulated and stored points are summed to calculate a score based on frequency, volume and rhythm. As explained at col. 11, line 48, with
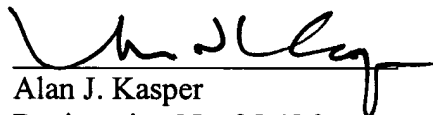
regard to step s102, a total phrase points of the two microphones are compared with each other and an appropriate animation is presented on a display screen.

Nothing in this disclosure is capable of remedying the deficiencies of Sone, as outlined above.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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